CHAPTER 5

Mitigation Monitoring and Reporting Program

Pursuant to Section 21081.6 of the Public Resources Code and the *CEQA Guidelines* Section 15097, a lead agency is required to adopt a monitoring and reporting program for assessing and ensuring compliance with the required mitigation measures applied to a proposed project for which an EIR has been prepared. As stated in the Public Resources Code (Section 21081.6(a)):

"...the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment."

Section 21081.6 provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined prior to final certification of the EIR. The lead agency may delegate reporting or monitoring responsibilities to another public agency or a private entity, which accept delegations. The lead agency, however, remains responsible for ensuring that implementation of the mitigation measures occur in accordance with the program.

The mitigation monitoring table below lists mitigation measures and project design features that are required to reduce the significant effects of the proposed project. These measures correspond to those outlined in Chapter 1, and discussed in Sections 3.1 through 3.15 of the Draft EIR, and those revised in this Final EIR (see Chapter 4). To ensure that the mitigation measures are properly implemented, a monitoring program has been devised which identifies the timing and responsible entity for monitoring each measure. The project applicant will have the responsibility for implementing the measures, and various public agencies will have the primary responsibility for enforcing, monitoring, and reporting the implementation of the mitigation measures.

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TABLE 5.1
MITIGATION MONITORING AND REPORTING PROGRAM – SADDLE CREST HOMES – ORANGE COUNTY, CA

MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
Aesthetics				
MM 3.1-1	Prior to the issuance of building permits, the applicant shall demonstrate that all exterior lighting has been designed and located so that all direct rays are confined to the property in a manner meeting the approval of the Manager, OC Planning, or designee.	Plan Check	Prior to the issuance of building permits	Manager, OC Planning, or designee.
MM 3.1-2	Prior to the recordation of an applicable subdivision map which creates building sites, the subdivider shall dedicate an easement for scenic/resource preservation purposes over Lots F-L, M, O, P, Q, R, S, T, U, V and a portion of Lot 68 to the County of Orange or its designee in a manner approved by the Manager, OC Parks. The subdivider shall not grant any easements over the property subject to the resource preservation easement unless such easements are first reviewed and approved by the County. Maintenance of the resource preservation easement area shall be the responsibility of the subdivider or assigns and successors and shall not be included in said easement offer.	Plan Check	Prior to the recordation of an applicable subdivision map	Manager, OC Parks
Air Quality				
MM 3.2-1	The following measures are required to reduce emissions of fugitive dust, including PM ₁₀ during construction activities for the proposed project and the non-clustered scenario. Prior to the issuance of any preliminary grading permits, the applicant shall provide evidence to the Manager, Permit Services that the following measures are compliant with SCAQMD Rule 403 for best available control measures.	Site Inspection	Prior to the issuance of any preliminary grading permits.	Manager, Permit Services
	 Haul trucks shall be covered when loaded with fill (applicable only to non-clustered scenario). 			
	 Paved streets shall be swept at least once per day where there is evidence of dirt that has been carried on to the roadway. 			
	 Watering trucks shall be used to minimize dust. Watering should be sufficient to confine dust plumes to the project work areas. 			
	Active disturbed areas shall have water applied to them three times daily.			
	 Inactive disturbed areas shall be revegetated as soon as feasible to prevent soil erosion. 			
	 For disturbed surfaces to be left inactive for four or more days and that will not be revegetated, a chemical stabilizer shall be applied per manufacturer's instruction. 			
	 For unpaved roads, chemical stabilizers shall be applied or the roads shall be watered once per hour during active operation. 			
	 Vehicle speed on unpaved roads shall be limited to 15 miles per hour. 			
	 For open storage piles that will remain on-site for two or more days, water shall be applied once per hour, or coverings shall be installed. 			

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	 For paved road track-out, all haul vehicles shall be covered, or shall comply with vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads. 			
	 During high wind conditions (wind speeds in excess of 25 miles per hour), all earthmoving activities shall cease or water shall be applied to soil not more than 15 minutes prior to disturbing such soil. 			
MM 3.2-2	The following mitigation measure shall be incorporated to minimize emissions of NO_X associated with construction activities for the proposed project and the non-clustered scenario:	Site Inspection	Prior to the issuance of any preliminary grading permits.	Manager, Permit Services
	 All construction equipment used on-site and for on-road export of soil shall meet USEPA Tier II or Tier III certification requirements. 			
MM 3.2-3	The project shall comply with all applicable SCAQMD regulations, i.e. Rule 401 – Visible Emissions, Rule 402 – Nuisance, and Rule 1113 – Architectural Coatings to minimize criteria air pollutant emissions (NO_X and PM_{10}).	Site Inspection	Prior to the issuance of any preliminary grading permits.	Manager, Permit Services
Biological Res	ources			
MM 3.3-1A	<u>Special-Status Plants</u> : To mitigate impacts to special-status plant species, the applicant shall implement the following measures:	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning
	 Impacts to foothill mariposa lilies shall be mitigated through off-site translocation and/or seed collection and off-site seeding onto a suitable location such as the preserved Saddle Creek North property. 			
	 Impacts to chaparral nolina shall be mitigated through off-site translocation and/or seed collection/off-site seeding at a suitable off-site location (e.g., onto the preserved Saddle Creek North property). 			
	 Impacts to Disturbed/Opuntia shall be mitigated for via salvage and translocation of prickly pear to an on- and/or off-site (i.e., Saddle Creek North) receptor area to the benefit of coastal cactus wren. All prickly pear on-site shall be salvaged and replanted, and planted in a density and configuration where they would represent potential habitat for cactus wren. Mitigation for the Disturbed/Opuntia shall be monitored in conjunction with the mitigation for sensitive plant communities which is proposed to take place on the Saddle Creek North property or other suitable location. 			
	Prior to implementation of the above measures, sensitive plant surveys shall be conducted to ensure no native plants will be impacted.			
MM 3.3-1B	Special-Status Plant Planting and Monitoring Plan: Prior to any ground disturbance, the applicant shall prepare a Special Status Plant Planting Plan for the foothill mariposa lily and the chaparral nolina. The plan shall include adaptive management practices that will ensure a minimum 90 percent survivorship which will be verified by	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning

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	the monitoring biologist. At a minimum, the plan shall include a description of the existing conditions of the receiver site(s), goals and timeline, transplanting and/or seed collection/off-site seeding or installation methods, monitoring procedures, plant spacing, adaptive management strategies, and maintenance requirements which will be reviewed and approved by the monitoring biologist.			
MM 3.3-1C	<u>Environmental Awareness Program</u> : As part of the mitigation plan to mitigate indirect impacts to special-status plants, sensitive natural communities, preserved open space and wildlife corridors, the applicant shall implement the following measures:	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning
	• The applicant shall implement a resident Environmental Awareness Program intended to increase awareness to residents of the sensitive plants, wildlife and associated habitats that occur in the preserved open space areas. The intention of the program shall be to encourage active conservation efforts among the residents to help conserve the habitats in the preserved open space. The program shall address inadvertent impacts from the introduction of invasive plant species (including escapees). At a minimum, the Environmental Awareness Program shall include the following components:			
	Informational kiosks shall be constructed at entrance points to hiking and equestrian trails and at various locations along the fence line that separates the project site and the open space area to inform residents and trail users on the sensitive flora and fauna that rely on the habitats found within the preserved open space. The intent of these kiosks is to bring awareness to the sensitive plants, wildlife and associated habitats which occur in the area.			
	 The applicant shall provide residents or the Home Owners Association (if applicable) with a brochure which includes a list of plant species to avoid in residential landscaping to prevent the introduction of invasive plant species to the surrounding natural communities. 			
MM 3.3-1D	Preconstruction Surveys for Special-Status Wildlife: Prior to disturbance activities, clearance surveys for special-status animal species shall be performed by a qualified biologist within the boundaries of disturbance. If any special-status animals are found on the site, a qualified biologist(s) with a CDFG Scientific Collection Permit shall relocate these species to suitable habitats within surrounding open space areas that would remain undisturbed, unless the biologist determines that such relocation cannot reasonably be accomplished, at which point CDFG will be consulted. Relocation methods (e.g., trap and release) and receiver sites shall be verified and approved by the CDFG prior to relocating any animals.	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning
	Active Sand Diego woodrat dens (i.e., houses or nests) shall be flagged and avoided whenever it is feasible to do so, as determined by a qualified biologist. If avoidance is not feasible, the houses shall be dismantled by hand under the supervision of the biologist. If young are encountered during the dismantling process, the material shall be placed back on the house and the house shall remain unmolested for two to three weeks in order to give the young enough time to mature and leave the house on their own accord. After two to three weeks, the nest dismantling process may begin again.			

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	Nest material shall be moved to suitable adjacent areas (oak woodland, scrub, or chaparral) that shall not be disturbed.			
MM 3.3-1E	Nesting Bird Surveys: All vegetation clearing for construction and fuel modification shall occur outside of the breeding bird season, between September 1 and February 14 (fall and winter) to ensure that no active nests would be disturbed.	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning
	If clearing and/or grading activities cannot be avoided during the nesting season, all suitable habitats shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to removal. Suitable nesting habitat on the project site includes grassland, scrub, chaparral, and woodland communities. If any active nests are detected, the area shall be flagged, along with a 300-foot buffer (or appropriate buffer as determined by the monitoring biologist), and shall be avoided until the nesting cycle is complete or it is determined by the monitoring biologist that the nest is no longer active.			
MM 3.3-1F	Use of Buffers Near Active Bat Roosts: During the November 1 to March 31 hibernation season, work shall not be conducted within 100 feet of woodland habitat that provides suitable bat roosting habitat. Bat presence is difficult to detect using emergence surveys during this period due to decreased flight and foraging behavior. If a qualified bat biologist determines that woodland areas do not provide suitable hibernating conditions for bats and they are unlikely to be present in the area, work may commence as planned.	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning
MM 3.3-1G	Bat Maternity Roosting Season: Night-time evening emergence surveys and/or internal searches within large tree cavities shall be conducted by a qualified biologist during the maternity season (April 1 to August 31) to determine presence/absence of bat maternity roosts near wooded project boundaries. All active roosts identified during surveys shall be protected by a buffer to be determined by a qualified bat biologist. The buffer will be determined by the type of bat observed, topography, slope, aspect, surrounding vegetation, sensitivity of roost, type of potential disturbance, etc. Each exclusion zone would remain in place until the end of the maternity roosting season. If no active roosts are identified then work may commence as planned. Survey results are valid for 30 days from the survey date. Should work commence later than 30 days from the survey date, surveys should be repeated.	•	Prior to any ground disturbance.	Manager, OC Planning
	Operations may continue for many years. Surveys do not need to be repeated annually unless additional clearing of potential roosting or hibernation habitat may occur outside of the non-roosting season.			
MM 3.3-1H	Bat Roost Replacement: All special-status bat roosts that are destroyed by the project shall be replaced at a 1:1 ratio onsite with a roost suitable for the displaced species (e.g., bat houses for colonial roosters). The design of such replacement habitat shall be coordinated with CDFG. The new roost shall be in place prior to the time that the bats are expected to use the roost (e.g., prior to April 1 if the roost destroyed by the project was used by a maternity colony), and shall be monitored periodically for five years to ensure proper roosting habitat characteristics (e.g., suitable temperature and no leaks). The roost shall be modified as necessary to provide a suitable roosting	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning

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	environment for the target bat species.			
MM 3.3-2	<u>Sensitive Natural Communities</u> : To mitigate impacts to coastal sage scrub, white sage scrub and needlegrass grassland, the applicant shall implement the following mitigation measures:	Mitigation Plan	Prior to any ground disturbance and prior to approval of grading plans.	Manager, OC Planning
	 Impacts to coastal sage scrub may be mitigated through payment into the NCCP/HCP in-lieu fee program. This shall only apply to those areas within the property that are located within the in-lieu fee coverage area and will comply with the NCCP/HCP's Construction Related Mitigation Measures. As an alternative to payment into the NCCP/HCP in-lieu fee program, impacts to coastal sage scrub within the in-lieu fee coverage area may be mitigated through off-site restoration/enhancement. 			
	 Prior to approval of grading plans, the project biologist shall review the contract specifications to verify that the NCCP/HCP's Construction Related Minimization/Mitigation Measures relating to removal of coastal sage scrub will be complied with and will provide written evidence to Manager, OC Planning or designee in the form of a note on the grading plans that this condition has been completed. 			
	 Impacts to coastal sage scrub and white sage scrub located on the site, but outside of the in-lieu fee coverage area shall be mitigated through off-site restoration/enhancement. The applicant shall acquire mitigation land off-site for restoration and enhancement of similar habitat at a ratio of at least 1:1 for coastal sage scrub and white sage scrub and a ratio of at least 0.75:1 for needlegrass off- site. Off-site mitigation for impacts to sensitive plant communities may include mitigation opportunities on Saddle Creek North. 			
	• A habitat restoration plan shall be prepared prior to any ground disturbance. The plan shall include adaptive management practices to achieve the specified ratio for restoration/ enhancement. At a minimum, the plan shall include a description of the existing conditions of the receiver site(s), goals and timeline, installation methods, monitoring procedures, plant spacing, adaptive management strategies, and maintenance requirements which will be reviewed and approved by the monitoring biologist to ensure the sensitive communities referred to above are re-established successfully at the ratios set forth above.			
MM 3.3-3	<u>Jurisdictional Waters</u> : To mitigate for impacts to jurisdictional waters, the applicant shall adopt the following measures in consultation with the regulating agencies (USACOE, CDFG, and RWQCB, where applicable):	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning
	 The applicant shall provide on- and off-site replacement and/or restoration/enhancement of USACOE, RWQCB and CDFG jurisdictional waters and wetlands at a ratio no less than 1.5:1. Off-site replacement may include mitigation on Saddle Creek North and/or include the purchase of mitigation credits at an agency approved off-site mitigation bank. 			

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	If replacement and/or restoration/enhancement would occur, a restoration plan shall be prepared that describes the location of restoration and provides for replanting and monitoring for a three year period following construction.			
MM 3.3-4	<u>Coast Live Oak Trees:</u> For impacts to coast live oak trees, the applicant shall incorporate the following mitigation measures (many of which have been addressed in the Tree Management and Preservation Plan for the proposed project (included as Appendix D.2 of the Draft EIR).	Mitigation Plan	Prior to any ground disturbance.	Manager, OC Planning
	• The applicant shall plant various sized trees, seedlings, and site-collected acorns within the landscaped portion of the proposed development as well as within the oak woodlands to be preserved on-site to restore/enhance these "receiver areas." The planting of 15-gallon oak trees along with a variety of other sized oak trees would add diversity to the restoration areas and improve the health and sustainability of all trees in the mitigation program. Trees shall be replaced at a 5:1, 8:1, 10:1, 12:1, or 15:1 replacement ratio depending on the size of the tree.			
	 A total of 2,281 coast live oak trees shall be planted, including up to 2,000 acorns and 281 saplings and young trees ranging in size from one-gallon containers to 66- inch boxes. Approximately 12 to 30 percent of the mitigation tree planting (a minimum of 250 trees and a maximum of 300 trees) shall occur in transition areas, such as the perimeter areas of the development and within the fuel modification areas. The remaining 70 to 88 percent of the mitigation trees shall be planted within receiver areas within and around the oak woodlands that are to be preserved on- site. 			
	 Coast live oak trees located within the fuel modification zones that require pruning shall comply with Orange County Fire Authority requirements. Trees shall be pruned by a qualified arborist specializing in the management and care of this tree species in consultation with the County Biological Resources Monitor. 			
	 Prior to the issuance of any grading permits or recordation of a subdivision map which creates building sites, whichever occurs first, the applicant shall obtain the approval of the Manager, OC Planning, of a tree preservation plan for the property. The Manager of OC Parks is to be consulted if the plan involves off-site tree mitigation in an OC Parks facility. 			
	 A seven-year monitoring program shall be prepared that includes performance standards and criteria for evaluating success. 			
	 Plant species commonly associated with oak woodlands shall be included as woodland enhancement as specified in an oak restoration plan prepared by a restoration specialist. 			
MM 3.3-5	Wildlife Movement Corridor:	Mitigation Plan	Prior to approval of grading	Manager, OC Planning
	Vegetation thinning shall occur only during daylight hours.		plans	

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	 During all excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the wildlife movement corridor and preserved habitat areas. 			
	 The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources (the wildlife movement corridor and preserved habitat areas during all project construction. 			
	 All construction work will occur during the daylight hours. In addition, construction activities shall not be permitted outside the hours of 7:00 AM and 8:00 PM, Monday through Saturday, excluding federal holidays. 			
	 The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. 			
	 A native vegetation buffer shall be installed to serve as a barrier to minimize the risk of introducing invasive, exotic plant species near the corridor. 			
	Signs shall be installed to educate future residents of the project about the wildlife corridor and ensure that trash, debris, and disturbance by trespassing or dogs are not permitted within or near the corridor.			
Cultural Resou	ırces			
MM 3.4-1	Prior to the issuance of any grading permit, the applicant shall provide written evidence to the Manager, OC Planning, that applicant has retained a County-certified archaeologist to observe grading activities and salvage and catalogue archaeological resources as necessary. The archaeologist shall be present at the pre-grade conference, shall establish procedures for archaeological resource surveillance, and shall establish, in cooperation with the applicant, procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the artifacts as appropriate.	Field Monitoring	Prior to the issuance of any grading permit.	Manager, OC Planning
	The County-certified archaeologist shall monitor all ground-disturbing activities, including brush clearance and grubbing, in areas within 100 feet of a known cultural resource and in areas where slope does not exceed 45 percent. The duration and timing of monitoring shall be determined by the archaeologist in consultation with the County and based on the grading plans.			
MM 3.4-2	If a cultural resource is encountered, the archaeologist shall be empowered halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated and appropriate treatment determined. If an archaeological monitor is not present, and if a cultural resource is encountered, construction activities shall be redirected away from the immediate vicinity of the find until it can be evaluated by a qualified archaeologist. If the resource is found by the archaeologist to be an historical resource, as defined in PRC Section 21084.1, or a unique archaeological resource as	Field Monitoring	Prior to the issuance of any grading permit.	Manager, OC Planning

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	defined in PRC Section 21083.2(g), and if avoidance is not feasible, a detailed treatment plan shall be prepared and implemented by a qualified archaeologist in consultation with the County and appropriate Native American group(s) (if the find is a prehistoric or Native American resource).			
	At minimum, the treatment plan prepared shall include sample excavation, surface artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The treatment plan shall also include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.			
	Construction activities shall be redirected to other work areas until the treatment plan has been implemented or the qualified archaeologists determines work can resume in the vicinity of the find.			
	Prior to the release of the grading bond the applicant shall obtain approval of the archaeologist's follow-up report from the Manager, OC Planning. The report shall include the period of inspection, an analysis of any artifacts found and the present repository of the artifacts. The final report shall also be provided to the South Central Coastal Information Center. The applicant shall prepare excavated material to the point of identification. Applicant shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. If the County does not accept the finds, they shall be curated at an accredited curation facility that has been approved by the County. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the Manager, OC Planning.			
MM 3.4-3	Prior to the issuance of any grading permit, the applicant shall retain County-certified paleontologist. The paleontologist shall prepare and submit to the County for approval a Paleontological Mitigation and Monitoring Plan that provides for the treatment of paleontological resources in accordance with the mitigation guidelines for areas of high potential outlined by the Society for Vertebrate Paleontology. The mitigation and monitoring plan shall address pre-construction salvage and reporting; pre-construction contractor sensitivity training; procedures for paleontological resources monitoring; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils, and the preparation of a final mitigation report.	Mitigation Plan and Site Inspection	Prior to the issuance of any grading permit.	Manager, OC Planning
	All earth moving activities in the Ladd Formation, Williams Formation, Silverado Formation, Santiago Formation, and Sespe/Vaqueros Formation shall be monitored full time, unless the paleontologist determines that sediments are previously disturbed or there is no reason to continue monitoring in a particular area due to other depositional factors, which would make fossil preservation unlikely or deemed scientifically insignificant. If it becomes apparent to the paleontologist that bedrock will not be impacted in an area, monitoring may be suspended temporarily until bedrock is impacted again. Spot-checking by the paleontologist will be allowed to determine if bedrock is being impacted. If impacts to bedrock resume, full-time monitoring will			

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	resume. In the event fossils are exposed during earth moving, construction activities shall be redirected to other work areas until the procedures outlined in the Paleontological Mitigation and Monitoring Plan have been implemented or the paleontologist determines work can resume in the vicinity of the find.			
	Prior to the release of the grading bond the applicant shall submit the paleontologist's follow up report for approval by the Manager, OC Planning. The report shall include the period of inspection, a catalogue and analysis of the fossils found, and the present repository of the fossils. Applicant shall prepare excavated material to the point of identification. The applicant shall offer excavated finds for curatorial purposes to the County of Orange, or its designee, on a first refusal basis. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by Manager, OC Planning. The applicant shall pay curatorial fees if an applicable fee program has been adopted by the Board of Supervisors, and such fee program is in effect at the time of presentation of the materials to the County of Orange or its designee, all in a manner meeting the approval of the Manager, OC Planning.			
MM 3.4-4	If human remains are encountered unexpectedly during construction excavation and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the NAHC. The NAHC will then identify a Most Likely Descendent who will provide recommendations as to the future disposition of the remains. Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices and taking into account the possibility of multiple human remains, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the Most Likely Descendent, as prescribed in this section (PRC 5097.98).	Site Inspection	During grading.	Manager, OC Planning
Geology and S	oils			
MM 3.5-1	Prior to the issuance of a grading permit, the applicant shall submit a geotechnical report to the Manager, Permit Services, for approval. The report shall include the information and be in the form as required by the Grading Code and Grading Manual.	Plan Check	Prior to the issuance of any grading permit.	Manager, Permit Services
MM 3.5-2	The applicant shall adhere to all recommendations included in the Geotechnical Report prepared for the project.	Plan Check	Prior to the issuance of any grading permit.	Manager, Permit Services
Greenhouse G	as Emissions			
MM 3.6-1	The following measures shall be implemented by the project developer to reduce GHG emissions:	Plan Check	Prior to construction.	Manager, OC Planning
	Construction equipment idling shall be limited, exceeding regulation requirements.			
	Recycle or reuse 75 percent of the clearing and grubbing waste (existing building)			

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	and construction materials and green waste). This measure exceeds the requirements under the CALGreen Code which mandates the recycling and/or salvaging a minimum of 50 percent of the nonhazardous construction and demolition debris.			
	 Common area landscaping shall be equipped with irrigation controller with rain shutoff. Automatic irrigation system controllers for landscaping shall comply with the following: 			
	 Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change. 			
	 Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture- based controllers are not required to have rain sensor input. 			
MM 3.6-2	The following measures shall be implemented by the builder to reduce GHG emissions:	Plan Check	Prior to the issuance of a certificate of use and	Manager, OC Planning
	Energy usage shall be reduced by at least 10 percent below Title 24 baseline		occupancy.	
	 A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by at least 20 percent shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fitting as required by the <i>California Building Standards Code</i>. The 20 percent reduction in potable water use shall be demonstrated by one of the following methods: 			
	 Each plumbing fixture and fitting shall meet reduced flow rates specified in Table 4.303.2 of the CALGreen Code (the table is included in Appendix G); or 			
	 A calculation demonstrating a 20 percent reduction in the building "water use" baseline as established in Table 4.303.1 of the CALGreen Code shall be provided. The calculation shall be limited to the following plumbing fixture and fitting types: water closets, urinals, lavatory faucets and showerheads, per CALGreen Code instructions for low-rise residential units. 			
	 The project shall reduce indoor and outdoor water consumption through the use of low flow fixtures and water-efficient appliances. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 4.303.3 of the CALGreen Code. 			
	 Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate gas, plumbing, electrical lines and other necessary penetrations must be sealed in compliance with the California Energy Code. 			

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	Light emitting diode lighting and other energy-efficient lighting technologies shall be incorporated into the project.			
	 The project shall employ the use of at least 50 percent Energy Star rated appliances 			
	 The project shall utilize passive energy efficiency strategies, such as roof overhangs, porches and inner courtyards. 			
	 The project shall incorporate light-colored roof materials to deflect heat and reduce energy demand for building cooling purposes 			
	 At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet-metal or other methods acceptable to the County to reduce the amount of dust or debris which may collect in the system. 			
	 The builder shall conduct a preconstruction kick-off meeting with rater and subcontractors. 			
	 Programmable thermostat timers shall be installed to regulate energy use. 			
	 Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with USEPA Phase II emission limits, where applicable. 			
	 Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with SCAQMD Rule 1168 VOC limits. 			
	 Mechanical exhaust fans which exhaust directly from bathrooms shall comply with the following: 			
	 Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. 			
	 Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidistat which shall be readily accessible. Humidistat controls shall be capable of adjustment between a relative humidity range of 50 to 80 percent. 			
	 Whole house exhaust fans shall have insulated louvers or covers which close when the fan is off. Covers or louvers shall have a minimum insulation value of R-4.2. 			
	 Additional measures from the GreenPoint rated checklist shall be included on building blueprints. 			
MM 3.6-3	The CC&Rs for Saddle Crest Homes shall include the following:	Plan Check	Prior to the issuance of a	Manager, OC Planning
	Include occupant recommendations for green building features and benefits, such		certificate of use and	

TABLE 5.1 MITIGATION MONITORING AND REPORTING PROGRAM - SADDLE CREST HOMES - ORANGE COUNTY, CA

MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	as Energy Star rated equipment, planting shade trees, high efficiency HVAC filters, installing carbon monoxide alarms and using low to no-VOC paint.		occupancy.	
	 Include occupant recommendations to reduce landfill-bound solid waste through avoidance, composting, and recycling (including installation of a built-in recycling center). 			
	 Provide homeowner education to limit outdoor lighting by using energy efficient low- voltage systems, photo sensors, solar and light emitting diode. 			
	 Adopt a water conservation strategy to be implemented by the homeowner, including providing homeowner education on designing water-efficient landscapes, reducing turf in landscapes and lawns, and planting native or drought-resistant trees and vegetation. 			
	 At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the County which includes all of the following shall be placed on the property: 			
	 Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. 			
	 Operation and maintenance instructions for the following: 			
	Equipment and appliances, including water-saving devices and systems, HVAC systems, water-heating systems and other major appliances and equipment.			
	Roof and yard drainage, including gutters and downspouts.			
	Space conditioning systems, including condensers and air filters.			
	Landscape irrigation systems.			
	■ Water reuse systems.			
	• Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.			
	Public transportation and/or carpool options available in the area.			
	Educational material on the positive impacts of an interior relative humidity between 30 to 60 percent and what methods an occupant may use to maintain the relative humidity level in that range.			
	• Information about water-conserving landscape and irrigation design and controllers which conserve water.			

TABLE 5.1
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	Instructions for maintaining gutters and downspouts and the importance of diverting water at least five feet away from the foundation.			
	Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.			
	Information about state solar energy and incentive programs available.			
	 A copy of all special inspection verifications required by the County 			
Hazards and H	lazardous Materials			
MM 3.7-1	At least three business days prior to any lane closure, the construction contractor shall notify Orange County Fire Authority of construction activities that would impede movement along roadways immediately adjacent to the project area, to allow for uninterrupted emergency access and maintenance of evacuation routes.	Site Inspection	At least three business days prior to any lane closure.	Manager, OC Planning
MM 3.7-2	Prior to the issuance of grading permit, the project applicant shall enter into a Secured Fire Protection Agreement with Orange County Fire Authority.	Plan Check	Prior to the issuance of grading permit.	Manager, OC Planning
MM 3.7-3	All gates within the project shall include installation of emergency opening devices as approved by Orange County Fire Authority.	Plan Check	Prior to the issuance of a certificate of use and occupancy.	Manager, OC Planning
MM 3.7-4	For the safety of construction personnel, neighboring homes, and firefighting safety in wildland areas, the project applicant, under the supervision of the Fire Chief, shall have completed the necessary portions of the fire access roads in the area prior to building permit issuance.	Site Inspection	Prior to the issuance of building permit.	Manager, OC Planning
MM 3.7-5	Prior to the issuance of any preliminary grading permits, the applicant shall provide evidence to the Manager, Permit Services, that the Vector Control District has surveyed the site and approved the project's Water Quality Management Plan, Grading Plans, and Storm Drain Improvement Plans for vector control measures.	Plan Check	Prior to the issuance of grading permit.	Manager, Permit Services
Hydrology and	l Water Quality			
MM 3.8-1	Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or prior to the issuance of any grading permits, whichever comes first, the following drainage studies shall be submitted to and approved by the Manager, Permit Services:	Plan Check	Prior to the recordation of a subdivision map.	Manager, Permit Services
	 A drainage study of the project including diversions, off-site areas that drain onto and/or through the project, and justification of any diversions; and 			
	When applicable, a drainage study evidencing that proposed drainage patterns will not overload existing storm drains; and			
	3) Detailed drainage studies indicating how the project grading, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows,			

TABLE 5.1
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MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	catch basins, storm drains, and flood water retarding, will allow building pads to be safe from inundation from rainfall runoff which may be expected from all storms up to and including the theoretical 100-year flood.			
MM 3.8-2	Prior to the issuance of any grading permits, the applicant shall in a manner meeting the approval of the Manager, Permit Services:	Plan Check	Prior to the issuance of any grading.	Manager, Permit Services
	1) Design provisions for surface drainage; and			
	 Design all necessary storm drain facilities extending to a satisfactory point of disposal for the proper control and disposal of storm runoff; and 			
	Dedicate the associated easements to the County of Orange, if determined necessary.			
MM 3.8-3	Prior to the recordation of a subdivision map (except for financing and conveyance purposes only), whichever comes first, the applicant shall participate in the applicable Master Plan of Drainage in a manner meeting the approval of the Manager, Permit Services, including payment of fees and the construction, or provide evidence of financial security (such as bonding), of the necessary facilities.	Plan Check	Prior to the recordation of a subdivision map.	Manager, Permit Services
MM 3.8-4	Prior to the issuance of any grading or building permits, the applicant shall submit for review and approval by the Manager, Permit Services, a final Water Quality Management Plan (WQMP) specifically identifying best management practices (BMPs) that will be used on-site to control predictable pollutant runoff. The applicant shall utilize the Orange County Drainage Area Management Plan (DAMP), Model WQMP, and Technical Guidance Manual for reference, and the County's WQMP template for submittal. This final WQMP shall update the project's Conceptual Water Quality Management Plan based on the final design and include the following:	Plan Check	Prior to the issuance of any grading or building permits.	Manager, Permit Services
	Detailed site and project description;			
	Potential stormwater pollutants;			
	 Post-development drainage characteristics; 			
	 Low impact development (LID) BMP selection and analysis; 			
	 Structural and non-structural source control BMPs; 			
	Site design and drainage plan (BMP Exhibit);			
	 GIS coordinates for all LID and treatment control BMPs; 			
	 Operation and Maintenance (O&M) Plan that: (1) describes the long-term operation and maintenance requirements for BMPs identified in the BMP Exhibit; (2) identifies the entity that will be responsible for long-term operation and maintenance of the referenced BMPs; and (3) describes the mechanism for funding the long-term operation and maintenance of the referenced BMPs; and 			

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MITIGATION MONITORING AND REPORTING PROGRAM – SADDLE CREST HOMES – ORANGE COUNTY, CA

MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	The BMP Exhibit from the approved WQMP shall be included as a sheet in all plan sets submitted for plan check and all BMPs shall be depicted on these plans. Grading and building plans must be consistent with the approved BMP exhibit.			
MM 3.8-5	Prior to the issuance of a certificate of use and occupancy, the applicant shall demonstrate compliance with the County's NPDES Implementation Program in a manner meeting the satisfaction of the Manager, OC Inspection:	Plan Check and Site Inspection	Prior to the issuance of a certificate of use and occupancy.	Manager, OC Inspection
	 Demonstrate that all structural best management practices (BMPs) described in the BMP exhibit from the project's approved WQMP have been implemented, constructed and installed in conformance with approved plans and specifications; 			
	 Demonstrate that the applicant has complied with all non-structural BMPs described in the project's WQMP; 			
	 Submit for review and approval, an Operations and Maintenance Plan for all structural BMPs (the plan shall become an attachment to the WQMP); 			
	 Demonstrate that copies of the project's approved WQMP (with attached Operations and Maintenance Plan) are available for each of the initial occupants; 			
	 Agree to pay for a Special Investigation from the County for a date 12 months after the issuance of a Certificate of Use and Occupancy for the project to verify compliance with the approved WQMP and Operations and Maintenance Plan; 			
	Demonstrate that the applicant has RECORDED one of the following:			
	 The CC&R's (that must include the approved Water Quality Management Plan and Operations and Maintenance Plan) for the project's Homeowner's Association; 			
	 A water quality implementation agreement that has the approved Water Quality Management Plan and Operations and Maintenance Plan attached; or 			
	 The final approved Water Quality Management Plan and Operations and Maintenance Plan. 			
MM 3.8-6	Prior to the issuance of any grading or building permits, the applicant shall demonstrate compliance under California's General Permit for Stormwater Discharges Associated with Construction Activity by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number; or other proof of filing in a manner meeting the satisfaction of the Manager, Permit Services. Projects subject to this requirement shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). A copy of the current SWPPP shall be kept at the project site and be available for County review on request.	Plan Check	Prior to the issuance of any grading or building permits.	Manager, Permit Services
MM 3.8-7	Prior to the issuance of any grading or building permit, the applicant shall submit a Erosion and Sediment Control Plan (ESCP) in a manner meeting approval of the	Plan Check	Prior to the issuance of any grading or building permits.	Manager, Permit Services

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	Manager, Permit Services, to demonstrate compliance with the County's NPDES Implementation Program and state water quality regulations for grading and construction activities. The ESCP shall identify how all construction materials, wastes, grading or demolition debris, and stockpiles of soil, aggregates, soil amendments, etc. shall be properly covered, stored, and secured to prevent transport into local drainages or coastal waters by wind, rain, tracking, tidal erosion or dispersion. The ESCP shall also describe how the applicant will ensure that all BPMs will be maintained during construction of any future public right-of-ways. A copy of the current ESCP shall be kept at the project site and be available for County review on request.			
and Use and	Planning			
MM 3.9-1	Prior to the recordation of an applicable subdivision map, the subdivider shall:		Prior to the recordation of an	Manager, OC Parks
	 Irrevocably offer a recreation easement for riding and hiking trail purposes in a location and in a manner meeting the approval of the Manager, OC Parks. The subdivider shall not grant any easement(s) over the property subject to the recreation easement unless such easements are first reviewed and approved by the Manager OC Parks. 		applicable subdivision map.	
	Design the necessary improvements for the trail, including, but not limited to grading, erosion control, signage, fencing, and a grade-separated crossing, as applicable, in a manner meeting the approval of the Manager, OC Parks.			
Noise				
ИМ 3.10-1	Prior to the issuance of any grading permits, the applicant shall produce evidence that the following noise control measures are in place:	Site Inspection	Prior to the issuance of any grading permits.	Manager, OC Planning
	 Construction shall not take place between the hours of 8:00 PM and 7:00 AM on weekdays, including Saturday, or at any time on Sunday or a federal holiday. 			
	 Signs will be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number with the County of Orange in the event of problems. 			
	 An on-site complaint and enforcement manager shall track and respond to noise complaints. 			
	 All construction vehicles or equipment, fixed or mobile shall be equipped with properly operating and maintained mufflers. 			
	 All construction operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control). 			
	 Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings. 			
MM 3.10-2	The applicant shall sound attenuate all residential dwellings against present and projected noise (which shall be the sum of all noise impacting the project) so that the	Plan Check	Prior to the issuance of any	Manager, Permit Service

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MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	composite interior standard of 45 dBA CNEL for habitable rooms and a source specific exterior standard of 65 dBA CNEL for outdoor living areas is not exceeded. The applicant shall provide a report prepared by a County-certified acoustical consultant, which demonstrates that these standards will be satisfied in a manner consistent with Zoning Code Section 7-9-137.5, as follows. Prior to the issuance of any building permits for residential construction, the applicant shall submit an acoustical analysis report describing the acoustical design features of the structures required to satisfy the exterior and interior noise standards to the Manager, Permit Services, for approval along with satisfactory evidence which indicates that the sound attenuation measures specified in the approved acoustical report have been incorporated into the design of the project.		grading permits.	
Public Services				
MM 3.12-1	Prior to the issuance of building permits the applicant shall comply with the development fee program for sheriff substation facilities or, if an applicable fee program has not been adopted by the Board of Supervisors, shall enter into a secured agreement with the County of Orange to pay development fees for a sheriff substation, as provided in Sections 7-9-700 through 7-9-713 of the Codified Ordinances of the County of Orange.	Plan Check	Prior to the issuance of building permits.	Manager, Permit Services
MM 3.12-2	Prior to the issuance of building permits, the applicant shall comply with the development fee program for Foothill Ranch Branch Library as provided in Sections 7-9-700 through 7-9-713 of the Codified Ordinances of the County of Orange and Board Resolution 87-1684.	Plan Check	Prior to the issuance of building permits.	Manager, Permit Services
MM 3.12-3	Prior to the issuance of building permits, the applicant shall pay all applicable school fees in accordance with state law.	Plan Check	Prior to the issuance of building permits.	Manager, Permit Services
Transportation	and Traffic			
MM 3.14-1	Prior to project occupancy, the project applicant shall contribute their fair share of the cost to install traffic signals and signal-related equipment at the intersection of Santiago Canyon Road and Live Oak Canyon Road.	Plan Check	Prior to project occupancy.	Manager, OC Planning
MM 3.14-2	Prior to project occupancy, the project applicant shall contribute their fair share of the cost to the following improvements at the intersection of El Toro Road and Glenn Ranch Road:	Plan Check	Prior to project occupancy.	Manager, OC Planning
	Eastbound Glenn Ranch Road: Install a second left turn lane			
	Westbound Glenn Ranch Road: Install a second receiving lane			
MM 3.14-3	Prior to the issuance of building permits, the applicant shall pay fees for the Major Thoroughfare and Bridge Fee Program listed below, in a manner meeting the approval of the Manager, Subdivision and Grading:	Plan Check	Prior to the issuance of building permits.	Manager, OC Planning
	Foothill/Eastern Transportation Corridor			

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MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	Foothill Circulation Phasing Program			
	Santiago Canyon Road			
MM 3.14-4	Prior to the issuance of any grading permits, the applicant shall provide adequate sight distance per Standard Plan 1117 at all street intersections, in a manner meeting the approval of the Manager, Permit Services. The applicant shall make all necessary revisions to the plan to meet the sight distance requirement such as removing slopes or other encroachments from the limited use area in a manner meeting the approval of the Manager, Subdivision and Grading Services.	Plan Check	Prior to the issuance of any grading permits	Manager, Permit Services and Manager, Subdivision and Grading Services
Utilities and Se	ervice Systems			
MM 3.15-1	Prior to the issuance of any precise grading permit, the applicant shall obtain approval from the Manager, OC Planning of a site plan delineating the capacity, number, and location of all proposed solid waste and recyclable collection areas.	Plan Check	Prior to the issuance of any precise grading permit.	Manager, OC Planning
PDF-1	Open space within Saddle Crest Homes accounts for 70 percent of the project site (approximately 79.8 acres). Approximately 51 acres of that open space will be offered for dedication to the County and is adjacent to the Cleveland National Forest, providing a forest buffer, which is a goal of the F/TSP.	Plan Check	Prior to approval of grading plans.	Manager, OC Parks
PDF-2	Interior private streets have been designed to rural street standards. Depending on whether the street is dual loaded or single loaded with residential lots, the paved widths of interior streets have been designed to vary as follows:	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
	 Single loaded streets where on-street parking is prohibited to one side of the street: Minimum paved width of 28 feet to 30 feet (measured flowline to flowline). 			
	Dual loaded streets with parking on both sides of the street: Minimum paved width of 36 feet to 40 feet (measured flowline to flowline).			
PDF-3	The project has been designed to cluster development at the urban edge along Santiago Canyon Road where development already exists to the south and southeast.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-4	The vesting tentative tract map for the project has been designed to provide easements for scenic/resource preservation purposes over Lots F-L, M, O, P, Q, R, S, T, U, V and a portion of Lot 68 to preserve the areas as open space. The project's homeowners association or a conservation organization will be responsible for the maintenance and upkeep of the open space areas in a manner meeting the approval of the Manager, OC Parks.	Plan Check	Prior to the recordation of an applicable subdivision map.	Manager, OC Parks
PDF-5	The F/TSP scenic corridor setback requirements of 100-feet from Santiago Canyon Road will be maintained. The project is consistent with the design component of the General Plan-adopted Viewscape Typical Section, including an enlarged parkway, a riding and hiking trail and a lack of curbs.	Plan Check	Prior to the recordation of an applicable subdivision map.	Manager, OC Planning
PDF-6	A detailed landscape plan for the project area has been prepared by a licensed landscape architect taking into account County Standard Plans for landscape areas,	Landscape Plan	Prior to approval of grading plans.	Manager, OC Planning

TABLE 5.1
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MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	adopted plant palette guides, applicable scenic and specific plan requirements, and water conservation measures contained in the County of Orange Landscape Code (Ord. No. 09-010). The landscape plan will not include invasive or escapee species in the plant palette.			
PDF-7	In accordance with the F/TSP, a Tree Management Preservation Plan has been developed by certified arborists.	Tree Management Preservation Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF-8	In accordance with the Tree Management Preservation Plan, oak tree monitoring will be performed following all tree plantings and relocations within the project site and directly adjacent to the site for a period of seven years. Oak trees will be maintained by the homeowners association as part of the project's CC&Rs.	Tree Management Preservation Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF-9	New slope areas along the exterior of the proposed development area will be revegetated with drought tolerant species. Plant species for revegetation will be in accordance with the F/TSP and Orange County Fire Authority plant palettes and use predominantly native species.	Landscape Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF 10	The project has been designed to avoid impacts to cultural resources.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-11	The project has been designed to be contained within a well-defined perimeter. This proposed configuration uses similar slope gradients as the existing conditions; however, the hills will be lowered and the valleys raised. The project grading makes for a more efficient project plan while still maintaining similar topographic characteristics as the existing condition.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-12	The project has been designed so that home sites are situated within areas surrounded by proposed grading which allows for commonly utilized solutions to remediate potential adverse geologic conditions.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-13	The project has been designed so that home sites are situated to avoid adjacency to steep unstable natural slopes; resulting in less remedial grading necessary to stabilize potential geologic hazards.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-14	The project design incorporates rolled curbs and gutters (instead of conventional curb, gutter and sidewalk).	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-15	As determined in consultation with the Orange County Fire Authority, the project includes a mid-point flat recovery area for turn-around of fire apparatus on long cul-desacs to assure adequate ingress and egress during emergency events.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-16	The project includes a <i>Precise Fuel Modification Plan that</i> has been developed to provide a landscape transition area along the interface between residential development and adjacent open space to provide wildfire protection.	Fuel Modification Plan	Prior to the issuance of any grading or building permits.	Manager, OC Planning
PDF-17	Automatic fire sprinkler systems will be installed for all homes.	Site Inspection	Prior to building occupancy.	Manager, OC Planning
PDF-18	The project has been designed with fire hydrants spaced at 300-foot intervals instead	Plan Check	Prior to approval of grading	Manager, OC Planning

TABLE 5.1
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	of the minimum 600-foot spacing required for homes with automatic fire sprinkler systems.		plans.	
PDF-19	The project includes a Fire Master Plan that has been approved by the Orange County Fire Authority providing enhanced construction features in certain areas adjacent to fuel modification zones. These include enhanced fire sprinkler systems and construction features per California Building Code Chapter 7A.	Fire Master Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF-20	In order to minimize project hazards relative to vector control and public health concerns, the water quality basin (dry extended detention basin) will be designed for a maximum 72-hour draw down period for retained runoff. The hydromodification basin will employ approved vector control treatment measures as specified in the California Department of Public Health's recommendations for best management practices for mosquito control in collaboration with the Orange County Vector Control District to mitigate potential vector issues.	Plan Check	Prior to the recordation of a subdivision map.	Manager, Permit Services
PDF-21	The project has been designed so each building site will accommodate three on-site parking spaces to minimize parking along roadways that could interfere with emergency vehicle access.	Plan Check	Prior to approval of grading plans.	Manager, Permit Services
PDF-22	The project has been designed to cluster homes into a single defensible location, creating a single line of defense around the community, which makes fire protection more effective.	Plan Check	Prior to approval of grading plans.	Manager, Permit Services
PDF-23	The project has been designed to mimic the hydrological characteristics of the site in its natural, undeveloped state through clustering the home sites, controlling development flows (runoff) with a hydromodification basin and water quality basin (PDF-24), and preserving the site's main drainage along the easterly boundary, thereby adhering to current hydromodification requirements established by the current MS4 permit.	Plan Check	Prior to the recordation of a subdivision map.	Manager, Permit Services
PDF-24	The project has been designed to treat development flows (runoff) with a dry extended detention water quality basin, while implementing the following low impact development techniques:	Plan Check	Prior to the recordation of a subdivision map.	Manager, Permit Services
	Conservation of natural areas, including existing trees, other vegetation and soils.			
	Keeping streets at minimum widths and eliminating paved sidewalks in parkways.			
	Minimizing the impervious footprint of the project.			
	Minimizing disturbances to natural drainages.			
PDF-25	The project will be designed to include the following best management practices to promote infiltration and slow down surface flows:	Plan Check	Prior to the recordation of a subdivision map.	Manager, Permit Services
	Impervious area dispersion.			
	Native drought-tolerant landscaping/efficient irrigation.			

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PDF-26	The project has been designed so that residences include a setback of at least 100 feet from Santiago Canyon Road and would be situated on large depth pads providing enough area for increased setbacks to reduce the impact of roadway noise.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning
PDF-27	The project has been designed to include landscaping providing additional noise attenuation to homes situated closest to Santiago Canyon Road.	Landscape Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF-28	The existing bi-directional Class-II bikeway (on-road striped lanes with parking prohibited) within Santiago Canyon Road will be reconfigured within Santiago Canyon Road to accommodate the turning lanes being provided for the project entry and will vary between five to eight feet, and a 16-foot-wide easement would be provided along the Santiago Canyon Road frontage for the riding and hiking trail.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-29	Interior private streets have been designed to incorporate rural street standards with no sidewalks and rolled curbs (except at the main entry where standard curbs will be used to control drainage).	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-30	The project has been designed to include a southbound left-turn lane (300-foot storage length), a northbound right-turn lane (320-foot storage length) and northbound acceleration lane at the project access point on Santiago Canyon Road.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-31	Roads within the project site will be privately owned and maintained and an entry passage feature will be constructed at the project entry. The entry passage feature will be setback from Santiago Canyon Road at a distance that complies with the Orange County Standard Plan No. 1107 (i.e., a minimum of 100 feet from the curb line of Santiago Canyon Road), to provide adequate vehicle stacking space.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-32	A stop sign, stop bar and stop legend will be provided on the project access road at Santiago Canyon Road.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-33	The project has been designed to be consistent with the following design components of the General Plan-adopted Viewscape Typical Section including: an enlarged parkway, a riding and hiking trail, and a lack of curbs.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-34	The project includes a Hydrology Analysis that demonstrates that the proposed development will not overload existing drainage facilities downstream of the project site or exceed existing runoff velocities and peak discharge at discharge points for the 2-, 5-, 10-, 25-, and 100-year storm events.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-35	The project includes a Conceptual Water Quality Management Plan (CWQMP) that has been prepared to identify preliminary best management practices (BMPs), which may be used on-site to control predictable pollutant runoff. The CWQMP has been based on the Orange County Drainage Area Management Plan (DAMP), Model WQMP, Technical Guidance Manual, and the County's WQMP template. The CWQMP includes the following:	Conceptual Water Quality Management Plan	Prior to the recordation of a subdivision map.	Manager, OC Planning
	Detailed site and project description.			

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MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	A description of potential stormwater pollutants.			
	Post-development drainage characteristics.			
	Low impact development (LID) BMP preliminary selection and analysis.			
	 Preliminary structural and non-structural source control BMPs. 			
	Preliminary site design and drainage plan (BMP Exhibit).			
	 GIS coordinates for all proposed LID and treatment control BMPs. 			
	Preliminary Operation and Maintenance Plan that: (1) describes the long-term operation and maintenance requirements for BMPs identified in the BMP Exhibit; (2) identifies the entity that will be responsible for long-term operation and maintenance of the referenced BMPs; and (3) describes the mechanism for funding the long-term operation and maintenance of the referenced BMPs.			
PDF-36	In order to comply with the MS4 permit, the water quality basin (dry extended detention basin) will be designed for a maximum 72-hour draw down period for retained runoff to mitigate potential vector issues. The hydromodification basin will employ approved vector control treatment measures as specified in the California Department of Public Health's recommendations for best management practices for mosquito control in collaboration with the Orange County Vector Control District to mitigate potential vector issues.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-37	The project will incorporate the use of pervious pavers and roof drains connected to pervious areas.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-38	The project has been designed to include a recreational trail for riding and hiking purposes along Santiago Canyon Road.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-39	Homes within the project site will include the installation of a fire alarm system.	Site Inspection	Prior to building occupancy.	Manager, OC Planning
PDF-40	The project has been designed to include either an on-site pump station or upgrading and connecting to the off-site Topanga Booster Station to provide sufficient fire flow pressure for the upper portions of the project.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-41	The project includes a water storage tank, to provide emergency storage to the residents of the project. The site may also be expanded to provide the Trabuco Canyon Water District with additional capacity to help achieve their emergency storage goals.	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning
PDF-42	Best management practices will be incorporated into the project to ensure that indirect impacts (i.e., edge effects) are avoided or minimized to the maximum extent possible. Lighting will be pointed away from the wildlife corridor and ambient light levels will be minimized to the maximum extent practicable. Additionally, the project's Water Quality Management Plan and Stormwater Pollution Prevention Plan will ensure that project runoff will not adversely affect the drainage within the wildlife corridor. Noise	Plan Check	Prior to the recordation of a subdivision map.	Manager, OC Planning

TABLE 5.1
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MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
	standards will follow County Codes and General Plan Policies. In addition, exterior lighting will not be used in the 50-foot setback area for the wildlife corridor and fencing will be limited to open fencing that does not exceed 40 inches in height. Vegetation thinning within the fuel modification area that is encroaching into the corridor will only occur on occasion and during daylight hours.			
PDF-43	Short-term construction-related noise impacts will be reduced by the implementation of a number of measures including the following:	Plan Check and Site Inspection	During construction.	Manager, OC Planning
	 During all excavation and grading on-site, the construction contractors will equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent practicable. The construction contractor will place all stationary construction equipment so that emitted noise is directed away from the wildlife movement corridor staging areas will not be placed in proximity to the wildlife corridor. 			
	 The construction contractor will stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors (the wildlife movement corridor and preserved habitat areas) during all project construction. 			
	 All construction work will occur during the daylight hours. The construction contractor will limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by the County. 			
	The construction contractor will limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes will not pass through sensitive land uses or residential dwellings			
PDF-44	The preliminary plant list was reviewed, and with the proposed plant palette, a native plant species buffer will serve as a barrier to minimize the risk of introducing invasive, exotic species near the corridor. In addition, signs will be installed to educate future residents of the project about the wildlife corridor and ensure that trash, debris, and disturbance by trespassing or dogs are not permitted within or near the corridor.	Landscape Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF-45	Protection measures for oak trees include fencing and protection of oak trees adjacent to construction areas. In addition, placement of fill, storage of equipment, and grading shall be prohibited within the dripline of any tree proposed for preservation. Retaining walls will be used to protect oaks proposed for preservation from surrounding cut and fill, and no surfaces will be places within a six-foot radius of oak tree trunks per the requirements of the F/TSP; any retaining walls will be placed outside of the root zone of the oak tree to be preserved.	Tree Management Preservation Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF-46	Although portions of the study area are within the Congressional boundaries of the Cleveland National Forest and therefore are not covered under the NCCP/HCP, the removal of coastal sage scrub communities will be conducted in compliance with the Construction Minimization Measures identified in the NCCP/HCP.	Plan Check	Prior to approval of grading plans.	Manager, OC Planning

TABLE 5.1
MITIGATION MONITORING AND REPORTING PROGRAM – SADDLE CREST HOMES – ORANGE COUNTY, CA

MM/PDF No.	Mitigation Measure/Project Design Feature	Method of Verification	Timing of Implementation	Responsibility
PDF-47	The project reservoir will be visually screened with native/drought-tolerant landscaping and will be painted a neutral tone to blend with the surrounding environment. Landscaping will not exceed the height of the reservoir.	Landscape Plan	Prior to approval of grading plans.	Manager, OC Planning
PDF-48	The project has been designed so that stormwater will be collected and cleansed through a first flush treatment system.	Plan Check	Prior to the recordation of an applicable subdivision map.	Manager, OC Planning
PDF-49	The Preliminary Landscape Plan for the project has been designed to:	Landscape Plan	Prior to the recordation of an	Manager, OC Planning
	 Preserve open space areas and create new landscaping that would assist in carbon intake and minimize surface water runoff. 		applicable subdivision map.	
	 Incorporate the use of native/drought tolerant plant materials. 			
	Utilize only a small percentage of turf in the common area landscape.			
PDF-50	The project site is located adjacent to a Class II bikeway.	Plan Check	Prior to the recordation of an applicable subdivision map.	Manager, OC Planning
PDF-51	The riding and hiking trail located along Santiago Canyon Road will be fenced along the roadway side of the trail.	Plan Check	Prior to the recordation of an applicable subdivision map.	Manager, OC Planning
PDF-52	The V-ditch aligned with the trail will have a rounded bottom to protect horses and cyclists who may step off to the side.	Plan Check	Prior to the recordation of an applicable subdivision map.	Manager, OC Planning